

Serial No. 10/775,658

Amendment to Office Action dated December 30, 2005

Amendment dated March 30, 2006

### **AMENDMENTS THE CLAIMS**

1. (Original) An apparatus, comprising:

a current measurement device;

a head gimbal assembly including a head to at least one of read and write information signals from/to a moving storage medium, said current measurement device electrically coupled to said head and said storage medium; and

said current measurement device is to measure current between said head and said storage medium.

2. (Original) The apparatus of claim 1 wherein said head is a magnetic head/slider.

3. (Original) An apparatus to measure contact between a magnetic recording head and a storage medium, comprising:

a current measurement device;

a head gimbal assembly including a magnetic recording head, said recording head electrically coupled to said current measurement device; and

a storage medium coupled to said current measurement device; and

said current measurement device to measure current between said magnetic recording head and said storage medium.

4. (Original) The apparatus of claim 3 wherein said storage medium is a rotating magnetic storage disk.

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5. (Original) The apparatus of claim 4 wherein said magnetic storage disk is coupled to a spindle and said spindle is coupled to said current measurement device.
6. (Original) The apparatus of claim 5 wherein said current measurement device is a current amplifier.
7. (Original) The apparatus of claim 5 wherein said current measurement device is an ammeter/voltage source.
8. (Original) The apparatus of claim 7 wherein said ammeter/voltage source is to supply voltage to said magnetic recording head.
9. (Original) A method of measuring current, comprising:  
coupling a current measurement device to a head of a head gimbal assembly, said head to at least one of read and write information signals from/to a moving storage medium;  
coupling said current measurement device to a said storage medium; and  
measuring current between said head and said storage medium with said current measurement device.
10. (Original) The method of claim 9 wherein said head is a magnetic recording head/slider and said storage medium is a magnetic storage disk.

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11. (Original) The method of 10 wherein said magnetic storage disk is coupled to a spindle and said current measurement device is coupled to said spindle.

12. (Original) The method of claim 11 wherein said current measurement device is a current amplifier.

13. (Original) The method of claim 11 wherein said current measurement device is an ammeter/voltage source.

14. (Original) The method of claim 13 further comprising:  
applying voltage to said magnetic recording head with said ammeter/voltage source.

15. (Previously presented) A method of determining flying height characteristics for a disk drive comprising:

coupling a current measurement device to a head of a head gimbal assembly, said head to at least one of read and write information signals from/to a moving storage medium;

coupling said current measurement device to a said storage medium;

measuring current between said head and said storage medium with said current measurement device; and

determining that said head has too low of a flying height based on said current measurement.

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16. (Original) A method of determining glide height characteristics for a disk drive comprising:

coupling a current measurement device to a glide head of a head gimbal assembly;

coupling said current measurement device to a said storage medium;

measuring current between said head and said storage medium with said current measurement device; and

determining presence of disk asperities based on said current measurement.

17. (Original) A method of controlling flying height of a magnetic head in a disk drive comprising:

coupling an ammeter/voltage source to the magnetic head of a head gimbal assembly;

coupling said ammeter/voltage source to a rotating magnetic storage medium;

applying voltage to said magnetic head;

measuring current between said head and said storage medium with said ammeter/voltage source;

and

adjusting an amount of applied voltage to said magnetic head based on said measure current.